

Globe valve actuator with emergency control function for 2-way and 3-way globe valves

- Actuating force 1000 N
- Nominal voltage AC 230 V
- 3-point control
- Nominal stroke 20 mm
- Design life SuperCaps 15 years



Technical data

Electrical data	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 198...264 V
	Power consumption in operation	2 W
	Power consumption in rest position	1 W
	Power consumption for wire sizing	4.5 VA
	Connection supply	Cable 1 m, 4 x 0.75 mm ²
	Parallel operation	Yes
Functional data	Actuating force	1000 N
	Setting emergency setting position	Actuator spindle retracted / extended, adjustable (POP rotary knob)
	Manual override	Gear disengagement with push-button
	Nominal stroke	20 mm
	Actuating time	150 s / 20 mm
	Actuating time emergency control function	35 s / 20 mm
	Sound power level motor max.	56 dB(A)
	Sound power level emergency setting position max.	60 dB(A)
	Position indication	Mechanical 5...20 mm stroke
	Safety	Protection class IEC/EN
Degree of protection IEC/EN		IP54
EMC		CE according to 2004/108/EC
Certification IEC/EN		Certified in according to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Principle of operation	Type 1.AA
	Rated impulse voltage supply	4 kV
	Control pollution degree	3
	Ambient temperature	0...50 °C
	Non-operating temperature	-40...80 °C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
	Weight	Weight approx.

Safety notes


- This actuator has been designed for application in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The switch for changing the direction of motion/the closing point may be adjusted only by authorised personnel. The direction of stroke is critical, particularly in connection with frost protection circuits.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.

Safety notes

- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

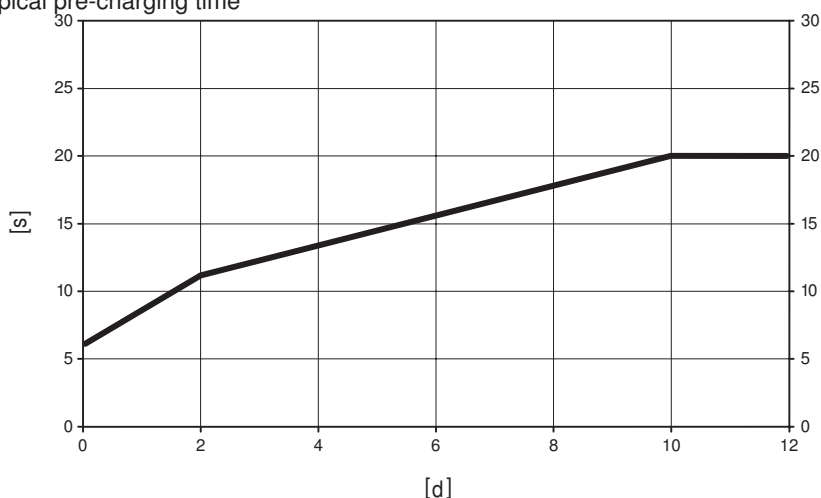
Mode of operation The actuator moves the valve to the desired operating position at the same time as the integrated capacitors are loaded.

Interrupting the supply voltage causes the valve to be moved to the selected emergency setting position (POP) by means of stored electrical energy.

Pre-charging time (start up) The capacitor actuators require a pre-charging time. This time is used for charging the capacitors up to a usable voltage level. This ensures that, in the event of an electricity interruption, the actuator can move at any time from its current position into the preset emergency setting position (POP).

The duration of the pre-charging time depends mainly on how long the power was interrupted.

Typical pre-charging time



[d] = Electricity interruption in days
 [s] = Pre-charging time in seconds
 PF[s] = Bridging time

	[d]				
	0	1	2	7	≥10
[s]	6	9	11	16	20

Delivery condition (capacitors) The actuator is completely discharged after delivery from the factory, which is why the actuator requires approximately 20 s pre-charging time before initial commissioning in order to bring the capacitors up to the required voltage level.

Installation on third-party valves The retrofit actuators for installation on a wide range of valves from various manufacturers are comprised of an actuator, bracket, universal valve neck adapter and universal valve stem adapter. Adapt the valve neck and valve stem to begin with, then attach the retrofit bracket to the valve neck adapter. Now fit the retrofit actuator into the bracket and connect it to the valve. Whilst taking the position of the valve closing point into account, secure the actuator to the bracket and then conduct the commissioning process. The valve neck adapter/actuator can be rotated through 360° on the valve neck, provided it is permitted by the size of the installed valve.

Installation on Belimo valves Please use standard actuators from Belimo for installation on Belimo globe valves. The installation of retrofit actuators on Belimo globe valves is technically possible.

Manual override Manual override with push-button possible - temporary. The gear is disengaged and the actuator decoupled for as long as the button is pressed.

The stroke can be adjusted by using a hexagon socket screw key (4 mm), which is inserted into the top of the actuator. The stroke spindle extends when the key is rotated clockwise.

High functional reliability The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication The stroke is indicated mechanically on the bracket with tabs. The stroke range adjusts itself automatically during operation.

Home position Setting ex-works: Actuator spindle is retracted.

Product features

- Direction of stroke switch** When actuated, the direction of stroke switch changes the running direction in normal operation.
The direction of stroke switch has no influence on the emergency setting position (POP) which has been set
- Rotary knob emergency setting position** The "Emergency setting position" rotary knob can be used to adjust the desired emergency setting position (POP). The POP range is in reference to the maximum height of stroke of the actuator.
In the event of an electricity interruption, the actuator will move into the selected emergency setting position, taking into account the bridging time (PF) of 2 s which was set ex-works.

Accessories

	Description	Type
Electrical accessories	Auxiliary switch add-on, 2 x single-pole double-throw switch	S2A-H

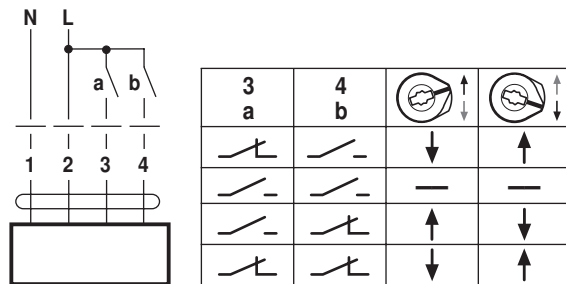
Electrical installation

Notes

- Parallel connection of other actuators possible.
- Direction of stroke switch factory setting: Actuator spindle retracted.

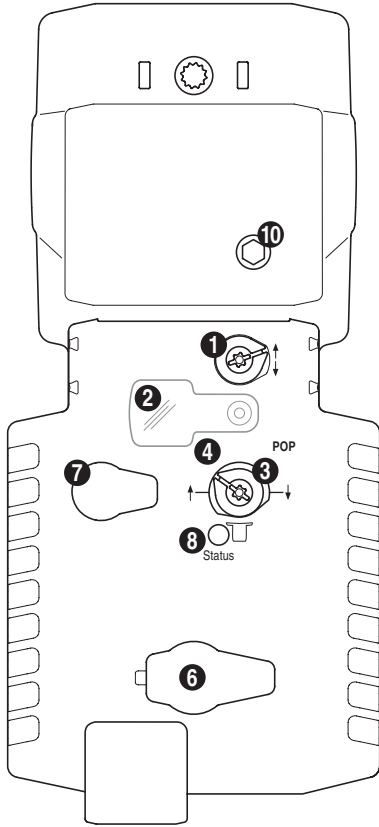
Wiring diagrams

AC 230 V; 3-point



Cable colours:
 1 = blue
 2 = brown
 3 = white
 4 = white

Indicators and operating elements



(1) Direction of stroke switch

Switching: Direction of stroke changes

(2) Cover, POP button

(3) POP button

(4) Scale for manual adjustment

(6) No function

(7) Gear disengagement button, temporary

Press button: Gear disengages, motor stops, manual override possible

Release button: Gear engages, standard mode

(8) LED displays

green: Off; Not in operation / Pre-charging time SuperCap / Fault SuperCap

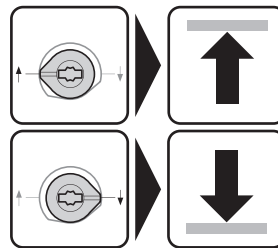
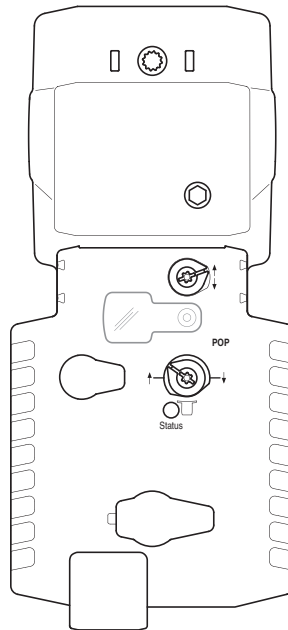
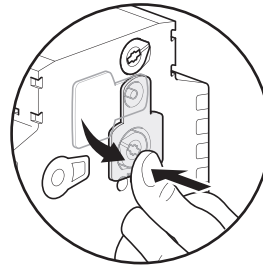
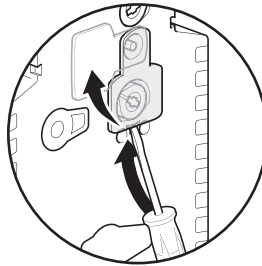
green: Illuminated; In operation OK

green: Blinking; POP function active

(10) Manual override

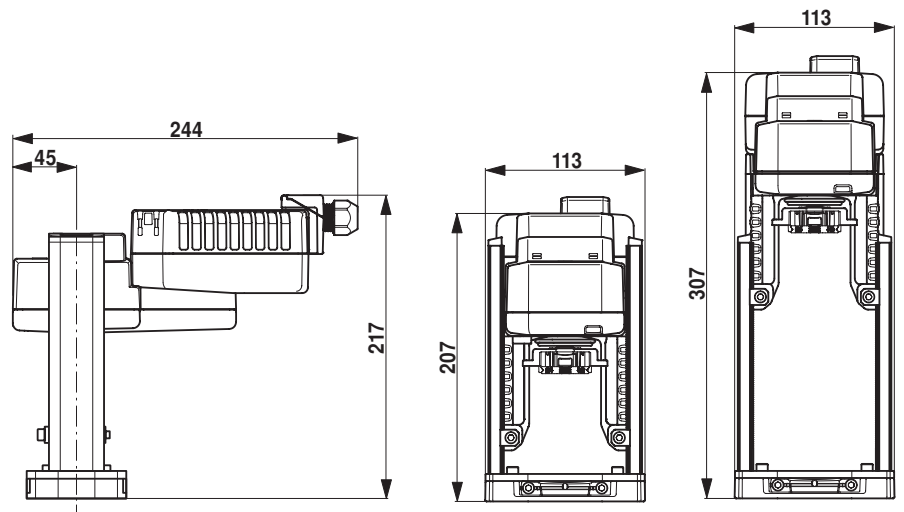
Clockwise: Actuator spindle extends

Counterclockwise: Actuator spindle retracts



Dimensions [mm]

Dimensional drawings



Further documentation

- Installation instructions for actuators